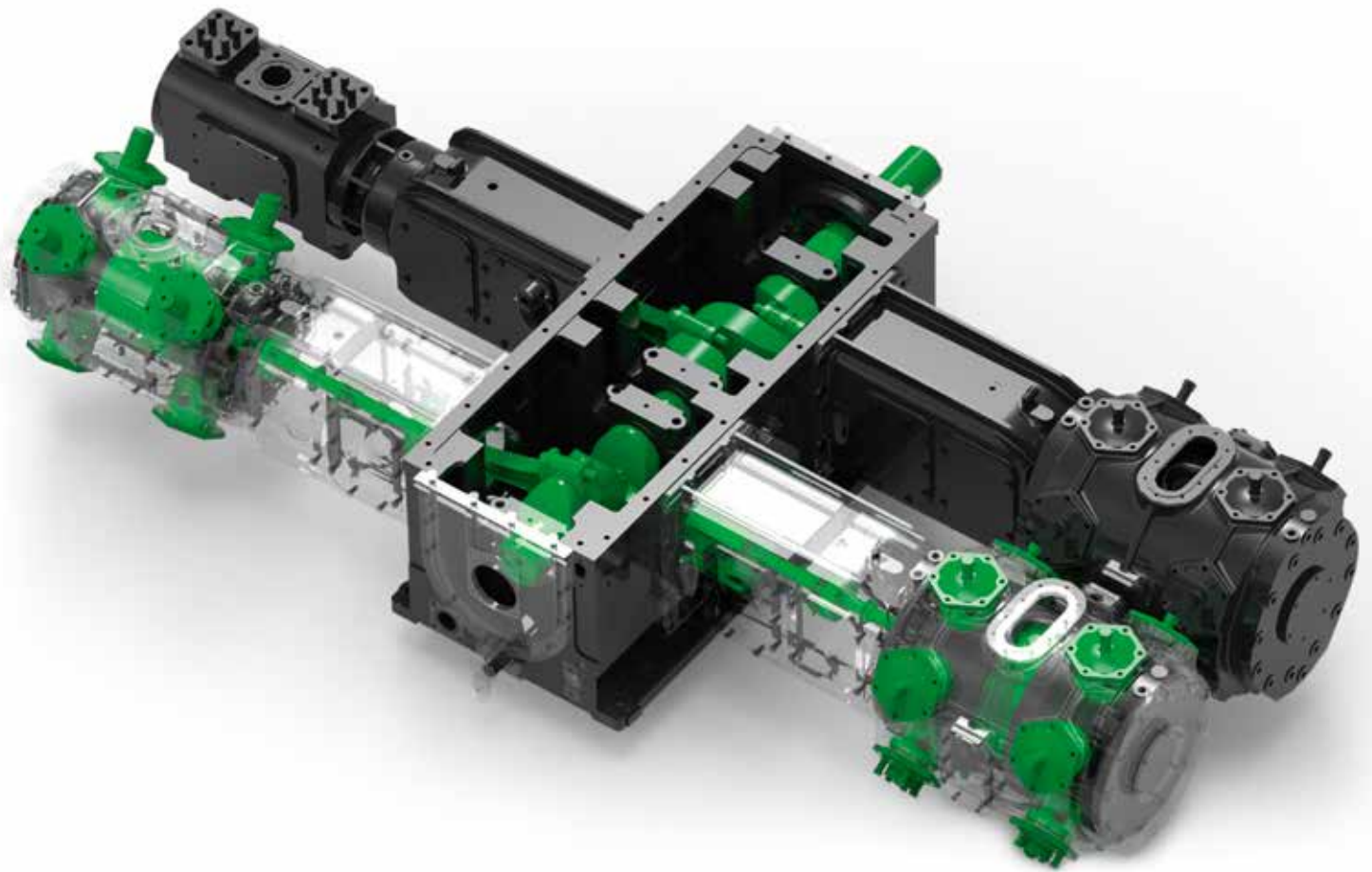


HORIZON

PET COMPRESSORS



RELIABLE BEYOND LIMITS





HORIZON
HORIZON



Water & CSD drinks

Oil free,
heavy duty
compressors



**Juices, tea
and isotonic**

Up to 6.000m³/h
big size units



Beer & wine

Available PET &
CO₂ technologies



Milk & Dairy

Customized
modular design



Edible oil

Available PET
& hydrogen
technologies

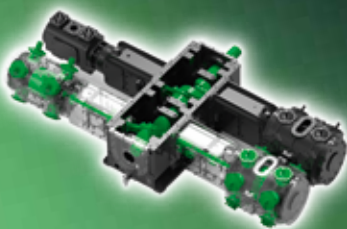


HORIZON 2000, 315kW



HORIZONTAL OPPOSED

HORIZON operates virtually
without vibrations



DOUBLE ACTING

HORIZON design gives
optimum performance



DIRECT COUPLED MOTOR

HORIZON is fitted with the most reliable
and efficient direct coupled transmission



PIONEERS IN PET MARKET



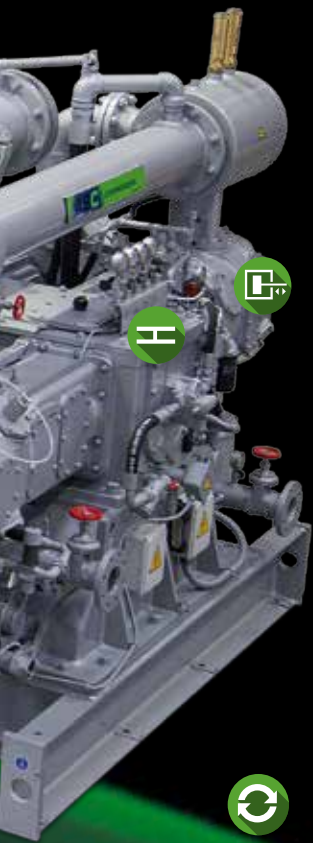
Pharma, chemicals and cosmetics

Wide regulation range



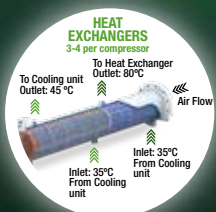
Aerospace & others

Variety of oil-free high pressure solutions



HEAT RECOVERY SYSTEM

Energy saving through heat recovery



80'

- **1986 - ABC becomes market standard.**
- All OEM manufacturers enter the market with ABC in scope.
- Top CSD and water producers trust ABC for 1st rotary machines.
- ABC enters edible oil market, big projects in Europe and America.
- Converters in Europe and America do their first projects with ABC.

90'

- Market leadership in America; + 100 units installed in Brazil.
- PET arrives to Asia with ABC.
- The biggest bottling factory of Asia in Shanghai installs ABC.
- ABC standard for extreme conditions; North Africa and Middle East.
- First installations in India & Russia.

00'

- ABC enters US market.
- Biggest blowing machine production site in Asia runs ABC.
- Number one converter in China installs + 50 units.
- +100 compressors installed in Africa.
- ABC expands in South East Asia.

10'

- +100 field audits in the world demonstrate ABC's leadership in efficiency.
- Growing markets SEA and Africa. Market leaders within Chinese end users.
- Biggest recip compressors in history 6.000m³/h.
- ABC standardized as preferred supplier among key worldwide bottlers and OEM.
- **2015 - HORIZON is launched as Market Benchmark.**

30 YEARS BLOWING YOUR BOTTLES

Since its **foundation in 1943**, ABC has focused on providing **the most reliable compressors for different sectors and applications. Its global orientation** and the commitment for growth was shown from its early exports in the 50's to its latest geographical expansion, having delivered compressors in more than 120 countries.

ABC's horizontal piston type technology came to be a perfect solution during early 80' for the new borned PET blowing. **This technical leadership** had been kept until nowadays, where ABC remains to be the **efficiency and reliability benchmark**.

Quality is our priority, using state of the art technical developments combined with highest standard materials and components. In that sense ABC's quality covers its compressors, the produced high pressure air and the whole company, in accordance to **global standards**.

Proximity and **customer care** guide our people, with one of the **largest service networks** in the market and a global production footprint (assembly sites in Europe-Spain, America-Brazil, Asia-China).

THE QUALITY OF THE AIR ISO 8573-1:

OILS: CLASS 1

PARTICLES: CLASS 1

HUMIDITY: CLASS 4

CLASS 0 CERTIFICATE available project by project.

Management System **ISO 9001**

Occupational Health and Safety **OHSAS 18001**

Environmental Performance **ISO 14001**



DESIGN FOCUSED ON TCO

TOTAL COST OF OWNERSHIP

INVESTMENT

More AIR FLOW from equivalent platform

HORIZON allows a flow increase for a given compressor frame of +30%. Less number of cylinders for a given flow, hence a big investment advantage.

EFFICIENCY

More CAPACITY for the same MOTOR

Thanks to its new technology and design **HORIZON** is the market benchmark in terms of efficiency. Both its specific consumption (kWh/Nm³) and the flow per installed power are better than any other compressor in the market.

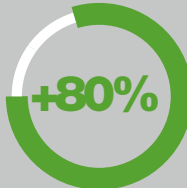
MAINTENANCE

Less spare parts
Longer service cycle

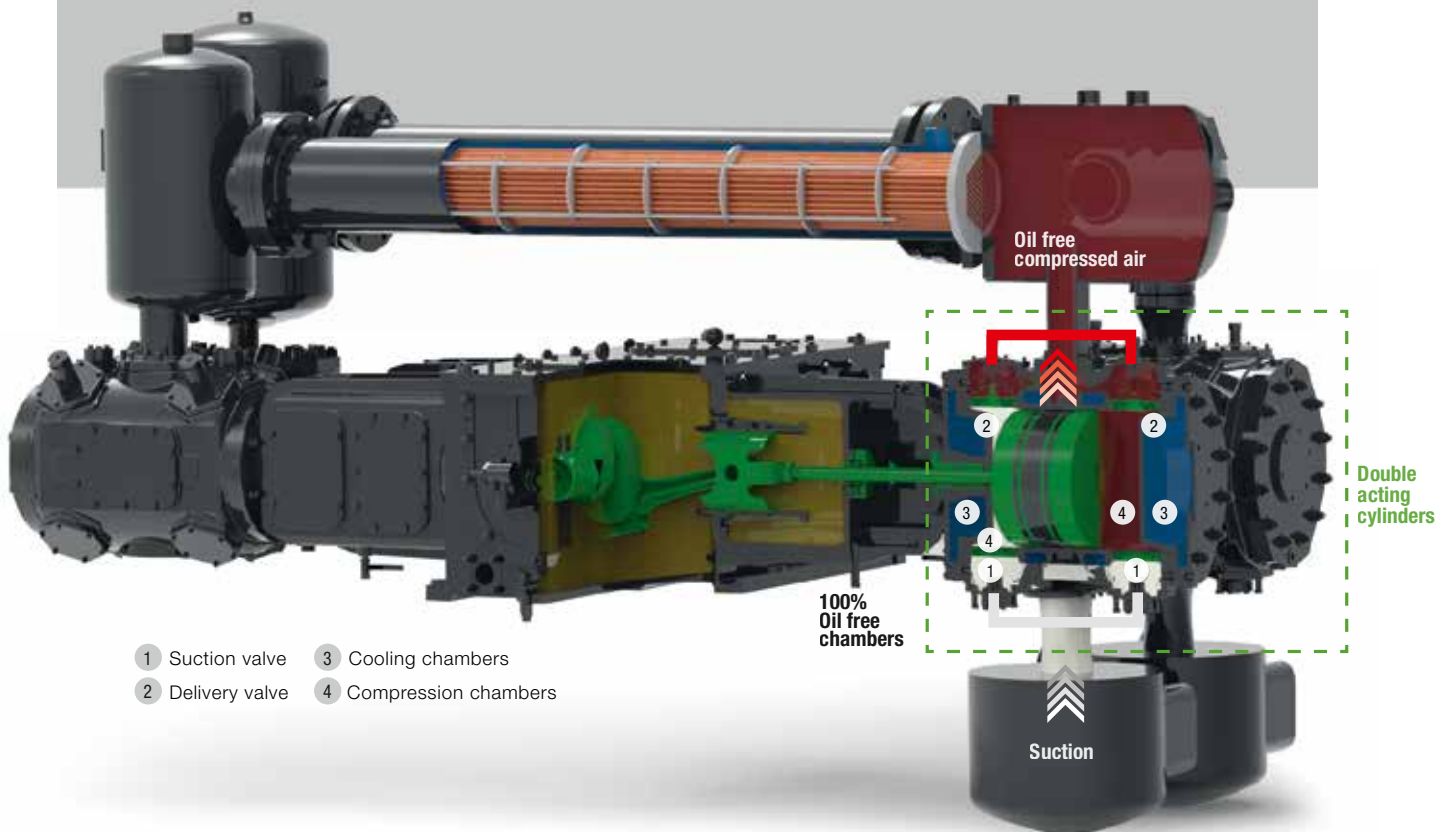
HORIZON design minimizes the number of wearing parts. Additionally the new components applied in this range assure the longest service cycle. The modularity of **HORIZON** offers interchangeable parts both for wearing and mechanical transmission parts.



High pressure compressors represent 50% of total energy needs in a blowing line



Energy consumption in 10 years time equals to 80% of TCO



HIGH-END CONFIGURATION

HORIZONTAL OPPOSED

Balanced forces
No vibrations

DOUBLE ACTING

Robust and efficient cylinder design

DIRECT COUPLED MOTOR

Efficient and reliable transmission

MODULAR and COMPACT DESIGN

Full range of compressors up to 6.000 m³/h capacity

The only OIL-FREE compressor that combines the best technological features in the market



HORIZONTAL OPPOSED

HORIZON operates virtually without vibrations

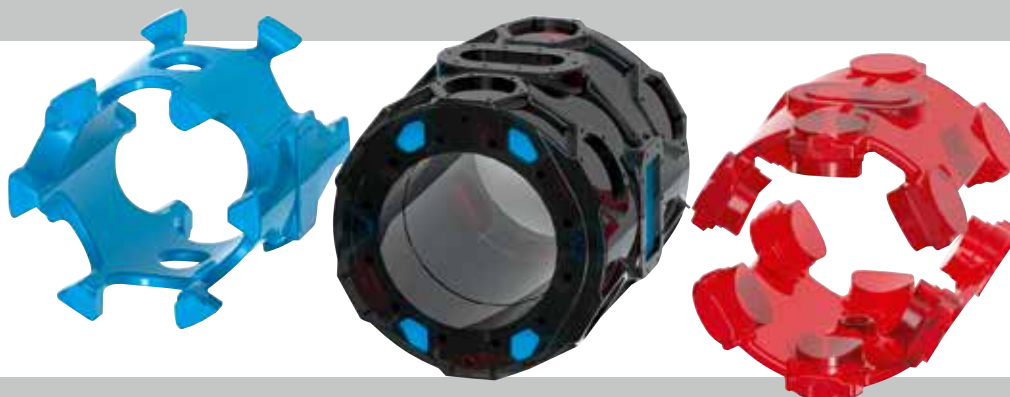
- Cylinders are horizontally opposed, with crankpins displaced by 180°, cancelling out the inertia loads.
- Virtually without vibration.
- Longer life of mechanical parts as they do not transmit excessive force or produce fatigue on structural parts of the compressor, 20 years machine lifetime.
- Providing stability of the high pressure air pipes.
- No anti-vibration pads or special foundations are required, + 2 kg/cm²
- Excellent adaptation to frequency converter up to 55%.
- Compressor and all peripheral components are skid mounted.



DOUBLE ACTING

HORIZON design gives optimum performance

- Double-acting cylinders minimise air leaks.
- Less mechanical losses and lower differential pressures.
- Achieving lower operation temperatures at each compression stage. Less energy wasted.
- Longer valves, rings and gaskets durability, no premature wearing.
- When unloaded, venting the intercoolers is not required, meaning efficiency increase and lower energy consumption.
- High performance cooling chamber with no valves in cylinder heads.
- A minimum of 2 suction / 2 discharge valves per stage, preventing one valve failure stopping the machine.



Perfect Volumetric Design

Red: compression chambers' design allows the uniform and stable air distribution with less load losses.

Blue: the generated heat is removed immediately and effectively by the water chambers to reach the isothermal cycle.



HORIZON
HORIZON

HORIZON 3000, 450kW ▼

Direct coupling

The gear reducer allows compressor's speed adjustment to the installation's necessities.



HIGH-END CONFIGURATION

+15% proven energy savings thanks to HORIZON technology



DIRECT COUPLED MOTOR

HORIZON is fitted with the most reliable and efficient direct coupled transmission

- Direct coupling means 5% energy saving comparing with other energy transmission methods.
- Virtually absence of mechanical energy loses.
- Longer duration of shaft alignment. Without belts there are no maintenance needs.
- Absence of radial forces, implying:
 - Longer life for the motor.
 - Longer life for compressor and for motor bearings, with longer lubrication intervals (20.000 hours).
- No more manual tensioning requirements for reliable operation.



MODULAR and COMPACT DESIGN

HORIZON assures smooth and easy installation

- Self-contained sets, even with peripherals pre-connected.
- Single inlet and outlet points for water and electricity.
- Centralized control for the entire ensemble.
- Fitting all the skids in standard container sizes.
- Interchangeable parts among different models.
- Easy mobility and relocation.
- Small size wearing parts. Cylinders at man hand level. No cranes for maintenance.

HORIZON 900, 132kW ▼



All in one package,
fitting in to standard containers.

Flexible package design,
giving the chance to relocate dryer-tank skid. At customer convenience.

Directly attached to the floor.
No vibration pads needed.



PREMIUM FEATURES

HORIZON is equipped with state of the art technology



FREQUENCY CONVERTER

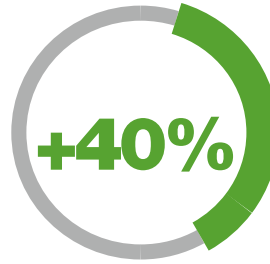
Perfect and wide adaptation
High regulation range

HORIZON takes full advantage of the energy saving by the frequency converter.

- Average 20% energy saving when regulating.
- Up to 60% energy saving at low regulation regime.
- Regulation span reaching 55% of the compressor capacity.
- Absence of intensity starting peaks: starting = nominal intensity.
- Allows more starts per hour.
- Minimizes pressure fluctuation when regulating:
 - Additional energy saving.
 - Stable pressure on the line.



Compressors work unloaded avg. 30% of the time, being their regulation capacity a key energy driver.



40% of the energy generated during the compression can be recovered through a proper heat recovery system.

- Mechanical protection for the compressor:
 - Lower starting torques.
 - Less unloaders actions.
- Optimum $\cos\phi$.
- Integrated supply with the electric cabinet.
- Harmonic protection in different filtering degrees.
- Furnished with new equipment, or retrofitted at a later date.

HORIZON 2400, 355kW ▼



HORIZON DRYERS

assuring CLASS 4 humidity by STAINLESS STEEL plate heat exchangers.



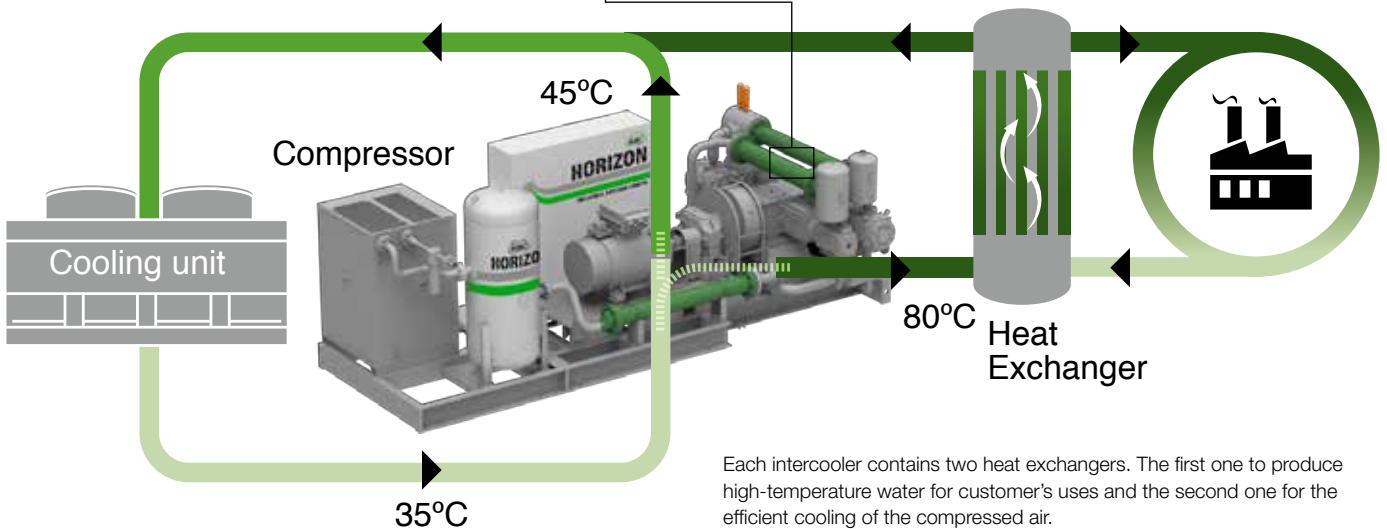
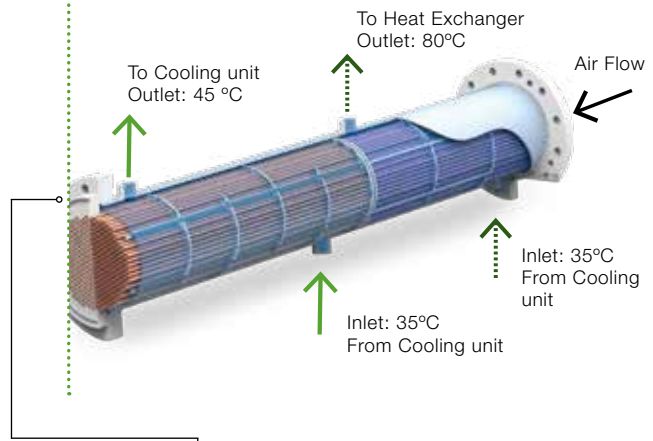
HEAT RECOVERY SYSTEM

Energy saving through heat recovery

HORIZON is able to collect hot water from all its coolers for a variety of plant uses.

- Average power saving of 20-40% through hot water supply.
- Providing hot water up to 80°C, in each of the stages. Customized solutions with water up to 90°C.
- Special compressor heat exchangers with double heating modules.
- Customized final heat exchangers adapted to customer needs.
- Furnished with new equipment, or retrofitted at a later date.

HEAT EXCHANGERS 3-4 per compressor



Each intercooler contains two heat exchangers. The first one to produce high-temperature water for customer's uses and the second one for the efficient cooling of the compressed air.



AIR RE-INJECTION

Air re-injection system matching blowing machine air recovery

HORIZON can adapt the re-injection system to any compressor of the range.

- Compact supply, simple and flexible.
- Saving between 33% and 66% of the compression energy.
- Furnished with new equipment, or retrofitted at a later date.



COMPRESSOR MANAGEMENT

ABC not only supplies the best machine but also the best system for a proper operation

- Its **remote control, ABILITY eye**, allows real time remote monitoring, as well as historical data analysis to apply predictive maintenance rules.
- ABC offers a proprietary software **to manage any installation with several compressors** interconnected with the aim of saving energy and assuring the proper use of available machinery.
- Furnished with new equipment, or retrofitted at a later date.

RANGE

HORIZON

HORIZON	CAPACITY		INSTALLED POWER	
	m ³ /h	cfm	kW	HP
HORIZON 400	425	250	75	100
HORIZON 500	500	294	90	125
HORIZON 600	630	371	90	125
HORIZON 800	750	441	110	150
HORIZON 900	870	512	132	180
HORIZON 1200	1.135	668	160	220
HORIZON 1400	1.400	824	200	270
HORIZON 1600	1.620	953	250	340
HORIZON 1800	1.780	1.047	280	380
HORIZON 2000	1.940	1.141	315	425
HORIZON 2100	2.090	1.229	315	425
HORIZON 2400	2.400	1.412	355	480
HORIZON 2700	2.650	1.559	400	545
HORIZON 3000	2.900	1.706	450	610

HORIZON PLUS

HORIZON PLUS	CAPACITY		INSTALLED POWER	
	m ³ /h	cfm	kW	HP
HORIZON PLUS 3200	3.120	1.835	450	610
HORIZON PLUS 3500	3.440	2.024	500	680
HORIZON PLUS 3800	3.810	2.241	560	760
HORIZON PLUS 4100	4.120	2.424	630	855
HORIZON PLUS 4400	4.360	2.565	630	855
HORIZON PLUS 4700	4.620	2.718	710	966
HORIZON PLUS 5000	5.000	2.941	800	1.080
HORIZON PLUS 5500	5.480	3.224	800	1.080
HORIZON PLUS 6000	6.000	3.529	900	1.215

- Designed up to 40 bar blowing
- Catalogue data for 35 bar according to ISO 1217 / 50Hz



▲ HORIZON PLUS 6000, 900kW

HORIZON PLUS 6000, the largest recip PET compressor.

GREEN & EASY OPERATION

EFFICIENT DESIGN

- Certified savings (+15%) audited in real operation conditions

OIL FREE AIR

- Guaranteed oil free air.
- ISO 8573-1

NO NOISE

- Customized soundproof cabinets down to 70 dBA
- Outdoor solutions under request



LONGEST SERVICE CYCLE

- Non stop running pattern from 8.000 to 12.000 hours



SIMPLE INSTALLATION

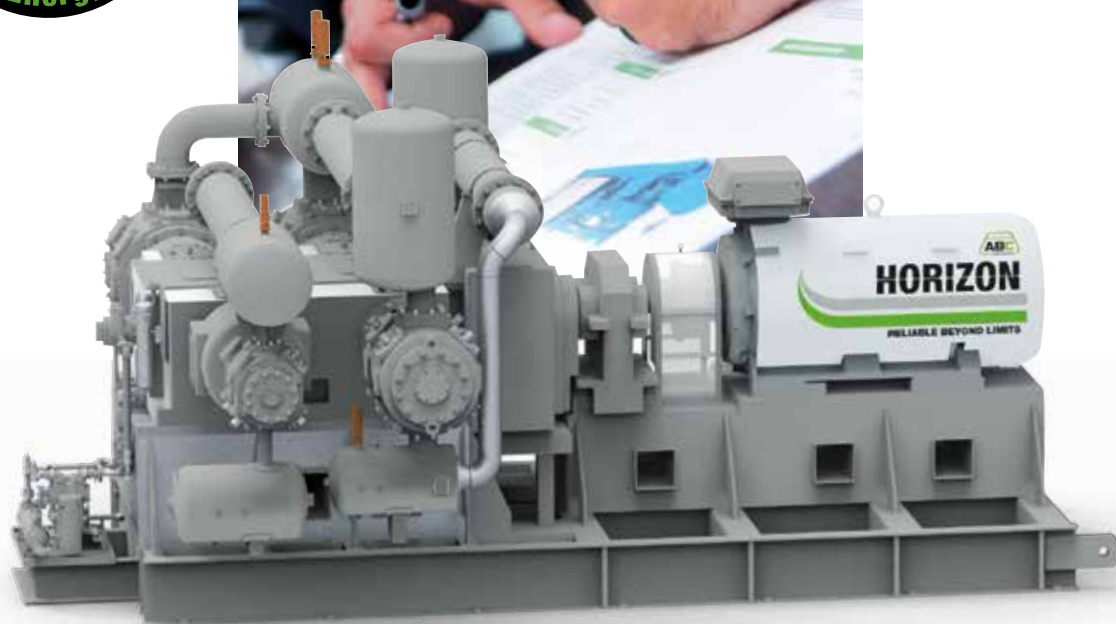
- No vibrations – no pads
- No special foundations
- Skid mounted and interconnected

REMOTE CONTROL

- Real time monitoring
- Predictive maintenance

QUICK MAINTENANCE

- No cranes needed
- Cylinders at man hand level
- Small parts



▲ HORIZON PLUS 5000, 800 kW



SALES & SERVICE NETWORK



MAIN OFFICES

AMERICA

Miami USA
Mexico City MEXICO
Caracas VENEZUELA
Bogotá COLOMBIA
Guayaquil ECUADOR
Havana CUBA
Lima PERU
Santiago CHILE
São Paulo Itupeva BRASIL

EUROPE

Eibar SPAIN
Grosseto ITALY
Lyon FRANCE
Schwerin GERMANY
Belgrade SERBIA
Istanbul TURKEY
Moscow RUSSIA

AFRICA & MIDDLE EAST

Casablanca MOROCCO
Tunis TUNISIA
Johannesburg SOUTH AFRICA
Accra GHANA
Tehran IRAN
Dubai UNITED ARAB EMIRATES

ASIA

Shanghai-Wujiang CHINA
Tokio JAPAN
Pune INDIA
Bangkok THAILAND
Ho Chi Minh VIETNAM
Jakarta INDONESIA
Manila PHILIPPINES
Karachi PAKISTAN
Dhaka BANGLADESH

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